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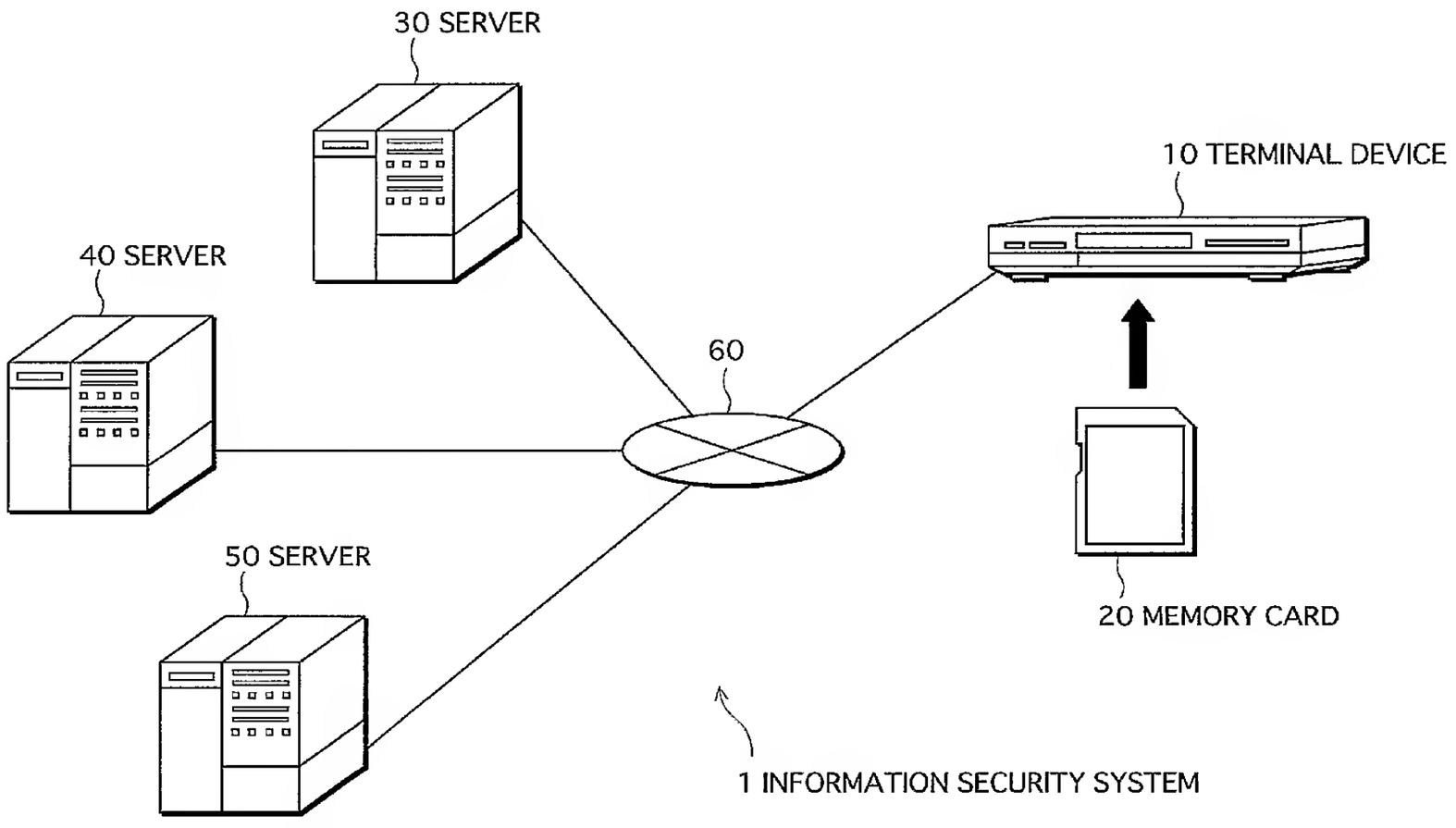
(54) Title: INFORMATION SECURITY APPARATUS AND INFORMATION SECURITY SYSTEM



(57) Abstract: An information security apparatus that manages information in a safe and reliable manner based on a complexity of an inverse operation on a set of integers that satisfy a condition. The information security apparatus comprises a private key generating unit operable to generate a private key, a parameter receiving unit operable to receive parameters which respectively determine conditions, and a public key generating unit operable to generate, with use of the private key, public keys from sets of integers that satisfy the conditions determined by the parameters.

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